## **Montana Board of Oil and Gas Conservation**

## **Environmental Assessment**

Operator: Continental Resources, Inc.
Well Name/Number: Ruben 1-9H
Location: SW SE Section 9 T26N R55E
County: Richland , MT; Field (or Wildcat) W/C (Bakken Horizontal)
Air Quality
(possible concerns)  Air Quality
Long drilling time: No, 30 to 40 days drilling time.
Unusually deep drilling (high horsepower rig): No, triple derrick drilling rig to drill to
19,979'MD/9,891'TVD, single lateral horizontal Bakken Formation well
Possible H2S gas production: Slight chance H2S gas production.
In/near Class I air quality area: No Class I air quality area.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required
<u>under 75-2-211.</u>
Mitigation:
_X Air quality permit (AQB review)
X Gas plants/pipelines available for sour gas
Special equipment/procedures requirements
Other:
Comments: No special concerns – using triple rig to drill to 19,979'MD/9,891'TVD, single lateral horizontal Bakken Formation well.
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Off-site disposal of solids/liquids (in approved facility)
Other:
Comments: 1430' of steel surface casing cemented to surface is adequate to
protect freshwater zones and cover the Fox Hills aquifer.
Soils/Vegetation/Land Use
(possible concerns)
Steam crossings: No, stream crossings, crossing only ephemeral drainage of Dugout
Creek, anticipated
High erosion potential: Yes, small cut, up to 9.1' and small fill, up to 9.0', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If
productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: Yes, large 500'X300' location size required.  Damage to improvements: No, slight.
Conflict with existing land use/values: Slight, surface use grasslands.
Mitigation
Avoid improvements (topographic tolerance)
Exception location requested
X Stockpile topsoil
Stream Crossing Permit (other agency review)
<ul><li>X Reclaim unused part of wellsite if productive</li><li>Special construction methods to enhance reclamation</li></ul>
Other
Comments: _Access will use existing county road, #146. About 3508' of new road
will be built into location off the existing county road #146. Drill cuttings will be disposed
of in the lined reserve pit. Oil based invert drilling fluids will be recycled. Completion
fluids will be trucked to a commercial Class II disposal. Cuttings pit will be backfilled
after remaining fluids have evaporated. No special concerns.
Health Hazards/Noise
(possible concerns)
Proximity to public facilities/residences: Closest residences, none within 1 mile in any
direction from this well location.  Possibility of H2S: Slight chance of H2S.
Size of rig/length of drilling time: Triple drilling rig/short 30 to 40 days drilling time
Mitigation:
_X_Proper BOP equipment
Topographic sound barriers
H2S contingency and/or evacuation plan
Special equipment/procedures requirements
Other: Comments: Adequate surface casing and operational BOP equipment will
mitigate any issues.
magate any location
Wildlife/recreation
(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites:None identified. Creation of new access to wildlife habitat: _No Conflict with game range/refuge management: _None in the area. Threatened or endangered Species:Species identified as threatened by the USFWS are Pallid Sturgeon, Interior Lease Tern, Piping Plover and Whooping Crane. Species listed as candidate species are the Greater Sage Grouse and Sprague's Pipit. NH tracker website for this Township and Range lists only two (2) species of concern as the Whooping Crane and the Eastern Red Bat.  Mitigation: Avoidance (topographic tolerance/exception) Other agency review (DFWP, federal agencies, DSL) Screening/fencing of pits, drillsite Other: Comments: Private surface lands. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.
Historical/Cultural/Paleontological
(possible concerns)
Proximity to known sites: None identified.
Mitigation
avoidance (topographic tolerance, location exception)
other agency review (SHPO, DSL, federal agencies)
Other:
Comments: On private surface lands. There may be possible
historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the
operator to consult with the surface owner as to his desires to preserve these sites or
not, if they are found during construction of the wellsite. The Board of Oil & Gas has no
jurisdiction over private surface lands.
Conial/Foomawia
Social/Economic
(possible concerns)
Substantial effect on tax base
Create demand for new governmental services
Population increase or relocation
Comments: Wildcat well. No concerns
Remarks or Special Concerns for this site
Well is a 19,979'MD/9,891'TVD, single lateral horizontal Bakken Formation well.
Summary: Evaluation of Impacts and Cumulative effects
No long term impacts expected. Some short term surface impacts will occur.

human environment, and (does/does not) require the preparation of an environmental impact statement. Prepared by (BOGC):\_/s/Steven Sasaki \_\_\_\_\_ (title:) Chief Field Inspector Date: \_January 13, 2012\_\_\_ Other Persons Contacted: Montana Bureau of Mines and Geology, GWIC website (Name and Agency) Richland County water wells (subject discussed) \_January 13, 2012 (date) US Fish and Wildlife, Region 6 website (Name and Agency) ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County (subject discussed) January 13, 2012\_ (date) Montana Natural Heritage Program Website (FWP) (Name and Agency) Heritage State Rank= S1, S2, S3, T26N R55E (subject discussed) January 13, 2012 (date) If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Others present during inspection:

Inspector: \_ \_

I conclude that the approval of the subject Notice of Intent to Drill (does/<u>does not</u>) constitute a major action of state government significantly affecting the quality of the